

Dire Demographic Trends Cast a Shadow on Russia's Future

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Recent demographic trends in Russia have caused widespread public concern. For example, in his State of the Nation Address to the Duma in July 2000, President Vladimir Putin said, "Year by year, we, the citizens of Russia, are getting fewer and fewer. . . . We face the threat of becoming a senile nation." Russia has experienced unusually high death rates from nonnatural causes, many related to alcoholism, and an increase in mortality that is unprecedented for an industrialized nation at peace. At the same time, the fertility rate has declined to among the world's lowest, while a high rate of abortion poses significant health problems. Deaths have exceeded births since 1992 (see Figure 1).

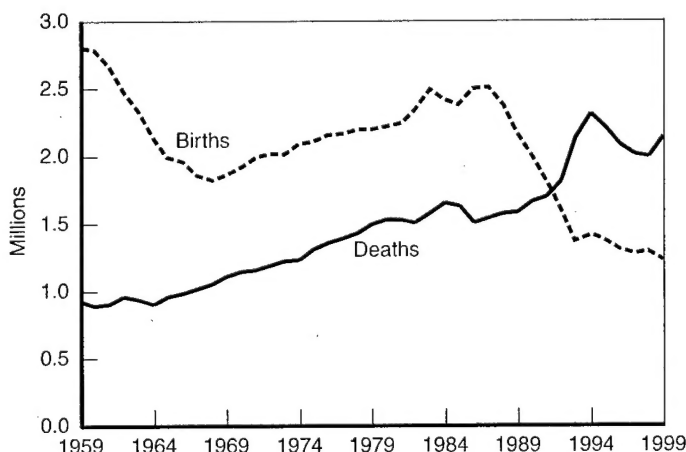
In *Dire Demographics: Population Trends in the Russian Federation*, RAND analysts Julie DaVanzo and Clifford Grammich investigate these trends. Specifically, the report examines overall population change, patterns of fertility and mortality, and shifts in age structure, as well as the

implications of demographic change for public policy. The authors conclude that many unfavorable current demographic trends are the continuation of long-term patterns, in some cases aggravated by economic stagnation and stress from recent social and political changes in Russian society. Demographic trends are shaping options available to Russia for dealing with issues ranging from health care reform to aging to national security.

POPULATION LOSS IN THE RUSSIAN FEDERATION

Since 1992, the population of Russia has declined by 3 million, from 148 million to 145 million in 2000. Net immigration, mostly consisting of ethnic Russians returning from former Soviet Republics, has prevented Russian population losses from being even greater. The most recent statistics indicate, however, that this ethnic Russian immigration has been declining and is unlikely to be a source of population stabilization in the future. There is public resistance to immigration partly because of concerns about the security risks of immigration by nonethnic Russians. Population decline is expected to accelerate; the population is projected to drop by nearly 20 million in coming decades, with the most pessimistic projection predicting a population of less than 100 million by the year 2050.

This decline in size has been difficult for Russians to accept. For most of the past century, Russia was part of a country—the Soviet Union—that was the third most populous nation in the world. This standing fed traditional assumptions in which population size was correlated with military and economic strength. But circumstances have changed. The Russian Federation, the largest of the Soviet successor states, is only the sixth most populous nation, behind China, India, the United States, Indonesia, and Brazil. Furthermore, its continuing population losses will push it further down the ranks of the most populous nations. In coming decades, should current long-term



SOURCE: Institut National d'Études Démographiques (INED), *Démographie de la Russie et son Empire sur la Toile*, 2000. Available at <http://www-census.ined.fr/demogrus>.

Figure 1—Births and Deaths in Russia, 1959–99

projections prove accurate, Pakistan, Bangladesh, Nigeria, Ethiopia, the Democratic Republic of the Congo, Mexico, and the Philippines will all surpass Russia in population.

DECLINING FERTILITY

The single greatest cause of recent population decline in Russia is a fall in the number of births (Figure 1). From 1987 to 1999, the annual number of births in Russia declined from 2.5 million to 1.2 million.

The fall in Russian fertility, however, long predates the final years of the Soviet Union. At the end of the 19th century, Russian women bore, on average, around 7 children; by 2000, this average had fallen to 1.2. Nor have declining fertility rates been unique to Russia. Since the 1950s, fertility rates have fallen throughout Europe and North America, and, as in Russia, they are now below replacement level, or 2.1 children per woman, in a number of industrialized countries (Figure 2).

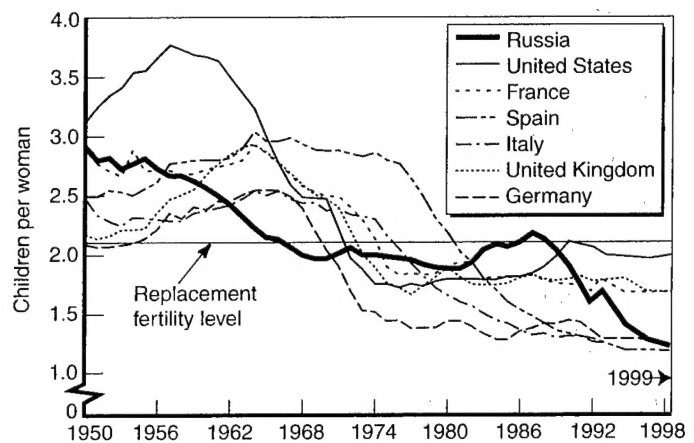
Contributing to the low fertility in Russia has been an abortion rate that is among the highest in the world. For decades, abortion was the main method in Russia for limiting births. In recent years, as the availability of effective contraceptives has increased, the number of abortions has declined.¹

INCREASED MORTALITY

Also contributing to population loss, mortality rates increased in the 1990s and life expectancy declined. Both of these developments intensified longer-term negative trends. In the mid-1960s, Russian life expectancy nearly equaled that in the United States, but then began to decline, while U.S. life expectancy continued to improve. (Figure 3).

Deaths among working-age males have contributed most to declining life expectancy. A 20-year-old male in Russia now has only a 1 in 2 chance of living to age 60, while one in the United States has a 9 in 10 chance. Russian male life expectancy is now 13 years less than that for Russian females—one of the largest differences by sex in the world. Male life expectancy in Russia is now below that in Guatemala, Indonesia, Iraq, Mexico, Morocco, and the Philippines.

Deaths due to violence, injuries, and other nonnatural causes have contributed heavily to high working-age male



SOURCES: For pre-1993 data, see Anatoly G. Vishnevsky's "Family, Fertility, and Demographic Dynamics in Russia, Analysis and Forecast," in Julie DaVanzo, ed., *Russia's Demographic Crisis*, Santa Monica, Calif.: RAND CF-124, 1996. For post-1992 data, U.S. Census Bureau, *International Data Base*, 2000, available at <http://www.census.gov/ipc/www/idbnew.html>.

Figure 2—Total Fertility Rate in Russia and Six Western Nations, 1950–99

mortality. Many of these deaths are alcohol related, and trends in Russian male mortality and alcohol consumption have paralleled each other throughout the past two decades.²

CHANGING AGE STRUCTURE

Despite high mortality rates, the Russian population is aging fairly rapidly (though less rapidly than other European nations). In recent decades, the number of persons aged 60 and over has doubled. The number of older persons will continue to grow in coming years, and the ratio of retired people to working-age people will increase. Between 2005 and 2020, for example, this ratio will increase by 50 percent.

Russia has an irregular population age structure that mirrors its turbulent history (Figure 4). The large population imbalance by sex among elderly Russians reflects very high Russian male mortality during World War II. During the war, births fell steeply, but they increased sharply shortly after it. Births declined again during the urbanization of the 1960s, but then increased in the 1970s and 1980s as the large cohort born shortly after World War II entered its childbearing years and as the Soviet government offered pro-natalist incentives. Births have fallen sharply since the late 1980s, as seen in Figures 1 and 2.

¹For more detail on abortion and contraception in Russia, see the companion policy brief, RB-5055, *Improvements in Contraception Are Reducing Historically High Abortion Rates in Russia*.

²For more detail on health and mortality in Russia, see the companion policy brief, RB-5056, *Russia's Health Crisis: Drinking, Disease, and Deteriorating Health Care*.

LOOKING TOWARD THE FUTURE: POLICY IMPLICATIONS

Population Stability

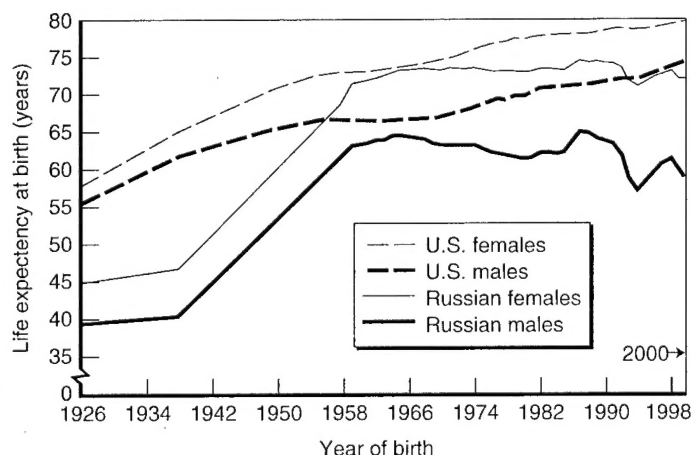
Stemming population loss in Russia may prove difficult without substantial economic improvement. Russia cannot now afford to fund pro-natalist incentives at a level that might increase fertility rates significantly. Immigration can help stabilize a declining population, but it is unclear whether Russia desires to attract the levels of immigration needed for population stability. To maintain a constant total population in the next 50 years, for example, Russia would need more than a half million immigrants annually—more than it has admitted in nearly every year of its history.

Health Care

In the short term, DaVanzo and Grammich note, health problems may be the most amenable to policy initiatives. Much of the increase in Russian mortality is a result of increased deaths due to accidents, injuries, violence, and other preventable causes. Broader public health education, similar to that in the United States, can help Russians improve health behaviors. Continuing improvements in contraceptive access can also help Russian women lead more stable and healthy reproductive lives.

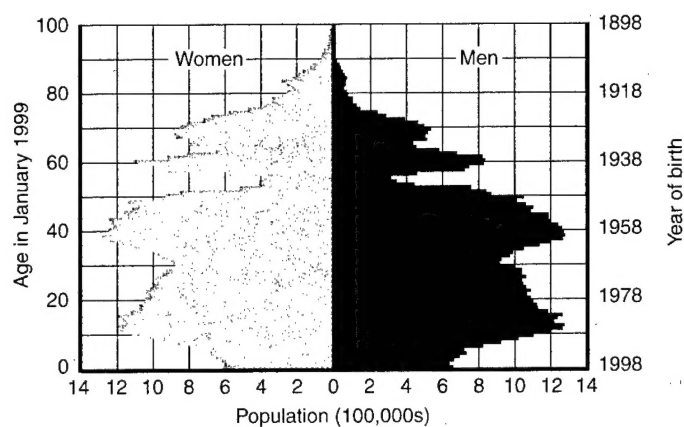
Social Services for Dependent Populations

The fluctuations in age-group populations caused by the irregular structure of the Russian population will



SOURCES: For pre-1995 data, Vladimir M. Shkolnikov and France Meslé, *The Russian Epidemiological Crisis as Mirrored by Mortality Trends*, in Julie DaVanzo, ed., *Russia's Demographic "Crisis."* For post-1994 data, U.S. Census Bureau, *International Data Base*, and Nezavimaya Gazeta.

Figure 3—Trends in Russian and U.S. Life Expectancy by Sex, 1926–2000



SOURCE: INED (2000).

Figure 4—Russian Population "Pyramid"

make planning for future years challenging. Fluctuations in youth populations will affect planning for health, education, and other social services. Growth in the elderly population in the next few years will be slow because of the low birth rate during World War II, but it will soon grow rapidly as those born during the postwar baby boom reach pension age. The ratio of all persons of "dependent" ages (i.e., those of pension age and those under 15) to those of working age in Russia is currently declining, giving Russia a demographic "window of opportunity" to adjust to its changing social needs. After the year 2005, however, this dependency ratio will increase, raising social welfare costs for Russia, particularly for older persons who are more expensive to support. Because Russia is aging less rapidly than other European nations, it may be able to draw lessons from elsewhere in meeting its growing pension obligations.

National Security

The number of Russians of or near military age—15 to 24—will begin to decline in 2004 and fall by nearly half by 2015. Many European states have also experienced declines in their military-age populations, and have sought to compensate for this loss by substituting capital and technology for troops in an effort to maintain their military strength, using either their own capital or sharing the burden of such efforts with allies.³ Russia's weak economy and its peculiar position in the international community may preclude these options. Conceivably, this could force Russia to increase reliance on weapons of mass destruction, including nuclear weapons, for its security.

³For a general discussion of such issues, see Brian Nichiporuk, *The Security Dynamics of Demographic Factors*, RAND MR-1088-WFHF/RF/DLPF/A, 2000.

Unquestionably, the stress of the post-Soviet transition has contributed to conditions that have created population decline in Russia. Many of the demographic challenges Russia faces, however, predate this transition, and may

require considerable time to correct. Overall, continued economic improvements may be the key to addressing these challenges.

*RAND policy briefs summarize research that has been more fully documented elsewhere. This policy brief describes work done for the Population Matters project of RAND's Labor and Population Program and documented in *Demographics: Population Trends in the Russian Federation*, by Julie DaVanzo and Clifford Grammich, RAND MR-1273-WFHF/DLPF/RF, 2001, 101 pp., ISBN: 0-8330-2930-4. Available free from Population Matters. Other policy briefs on this research address abortion and contraception in Russia, and Russian mortality and health care. Population Matters is funded by the William and Flora Hewlett Foundation, the David and Lucile Packard Foundation, the Rockefeller Foundation, and the United Nations Population Fund. Population Matters publications and other project information are available at <http://www.rand.org/popmatters>. Preparation of this policy brief was also sponsored by RAND's Center for Russia and Eurasia, which provides policymakers, scholars, business leaders, and citizens with an in-depth understanding of developmental processes in Russia and the New Independent States in Eurasia. RAND publications are available from RAND Distribution Services (Telephone: 310-451-7002; toll free 877-584-8642; Fax: 310-451-6915; email: order@rand.org; or the web: www.rand.org/publications/order). RAND® is a registered trademark. RAND is a nonprofit institution that helps improve policy and decisionmaking through research and analysis; its publications do not necessarily reflect the opinions or policies of its research sponsors.*

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